

Rumrill, Nancy

From: Dan Johnson <DanJohnson@florencecopper.com>
Sent: Tuesday, May 8, 2018 4:00 PM
To: Rumrill, Nancy
Cc: Maribeth E. Greenslade
Subject: RE: Notification of Intent and Scope of Planned Formation Testing for the PTF Area
Attachments: ATT00001.txt

Hi Nancy,

Thank you for forwarding.

Cheers,

Dan Johnson VP | General Manager



Florence Copper Inc.
1575 W. Hunt Highway Florence AZ USA 85132
C 520-233-1930 T 520-374-3984 F 520-374-3999
E danjohnson@florencecopper.com Web florencecopper.com

From: Rumrill, Nancy [<mailto:Rumrill.Nancy@epa.gov>]
Sent: May-03-18 1:39 PM
To: Dan Johnson
Cc: Maribeth E. Greenslade
Subject: FW: Notification of Intent and Scope of Planned Formation Testing for the PTF Area

Hi Dan,
Please find attached approval letter for the proposed formation testing. Let us know if you have questions.
Thanks, Nancy

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Nancy Rumrill ([rumrill.nancy@epa.gov](mailto:rumrill.nancy@epa.gov))  
Drinking Water Protection Section (WTR-3-2)  
US EPA, Region IX  
75 Hawthorne St.  
San Francisco, CA 94105  
Phone (415) 972-3293

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From: Dan Johnson [<mailto:DanJohnson@florencecopper.com>]  
Sent: Wednesday, May 2, 2018 2:33 PM  
To: Maribeth E. Greenslade <[Greenslade.Maribeth@azdeq.gov](mailto:Greenslade.Maribeth@azdeq.gov)>  
Cc: Rumrill, Nancy <[Rumrill.Nancy@epa.gov](mailto:Rumrill.Nancy@epa.gov)>; David M. Haag <[Haag.David@azdeq.gov](mailto:Haag.David@azdeq.gov)>; Lorri Rodriguez <[LorriRodriguez@florencecopper.com](mailto:LorriRodriguez@florencecopper.com)>  
Subject: RE: Notification of Intent and Scope of Planned Formation Testing for the PTF Area

Hi Maribeth,

Thank you for review our formation testing proposal submitted to the USEPA dated March 23, 2018. In response to your request, Florence Copper (FC) will perform the following tasks during the planned aquifer testing:

1. In addition to the wells proposed to be used for observation during the aquifer tests, FC will use transducers to monitor water levels at wells M54-O, M57-O, M58-O, M59-O, M60-O and MW-01-O.
2. The fourth step of each of the planned step rate aquifer tests will be conducted as a constant rate test that will extend in duration for a minimum of 8 hours, and maximum of 24 hours.
3. The criteria for discontinuing pumping after 8 hours are:
  - a. When the pumping rate results in a clear drawdown trend on a semi-logarithmic plot at the target monitoring well within 8 hours of pumping, the pumping test will be terminated at 8 hours.
  - b. If a clear drawdown trend cannot be obtained within 8 hours of pumping, the test will be conducted until either of the following conditions occur: (1) a clear drawdown trend is observed or (2) the duration of the pumping reaches 24 hours.
4. As described in the proposed testing, we intend to discontinue monitoring for the tracer after 14 days. This is based on our observations regarding groundwater flow velocities based on the aquifer test we conducted at well O-07, one the new PTF observation wells. We expect to see tracer break through before 14 days, and will discontinue the test at 14 days if we have observed break through. If we have not observed breakthrough at 14 days, we will continue the test beyond 14 days until we observe tracer breakthrough.

Based on our discussion, we understand that our current proposal satisfies the requirements of the Permit (APP P-106360) as written, and that this email is sufficient documentation regarding our planned activities during the proposed testing in addition to those required by the Permit.

Best Regards,

Dan Johnson VP | General Manager



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From: Maribeth E. Greenslade [<mailto:Greenslade.Maribeth@azdeq.gov>]  
Sent: April-26-18 2:41 PM  
To: Dan Johnson; Rumrill, Nancy

Cc: Lorri Rodriguez; David M. Haag

Subject: RE: Notification of Intent and Scope of Planned Formation Testing for the PTF Area

Hi Dan,

ADEQ reviewed the pre-operational formation testing procedures described in your March 23, 2018 letter to EPA.

ADEQ requests the following additions to the Stage 2 pump testing at the four outermost recover wells:

1. Include the following wells as observation wells for all four pumping wells: M54-O, M57-O, M58-O, M59-O, M60-O and MW-01-O along with proposed FCI recommendations for observation wells within the PTF.
2. Once stabilization of the step drawdown test in Step 4 has been obtained, extend the duration of the constant rate aquifer test from 120 minutes to a minimum of 8 hours and maximum of 24 hours.
3. Provide the criteria that will be used to determine when pumping for the constant rate aquifer tests may cease and the recovery test begins.
4. Although not an ADEQ requirement, we recommend clarifying language on the tracer test to state that the tracer test study will conclude when the tracer first arrives and that if additional time from the predicted 14 days is needed for tracer breakthrough the monitoring of the tracer will continue until the tracer is first detected.

Please respond to let ADEQ know whether these changes are to be included.

Thanks,  
Maribeth

Maribeth E. Greenslade, P.E.  
Associate Environmental Engineer  
Groundwater Protection Value Stream  
Arizona Department of Environmental Quality  
1110 W. Washington Street  
Phoenix, Arizona 85007  
602 771-4578  
[mg3@azdeq.gov](mailto:mg3@azdeq.gov)

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From: Dan Johnson [<mailto:DanJohnson@florencecopper.com>]  
Sent: Monday, March 26, 2018 9:06 AM  
To: Rumrill, Nancy <[Rumrill.Nancy@epa.gov](mailto:Rumrill.Nancy@epa.gov)>  
Cc: Maribeth E. Greenslade <[Greenslade.Maribeth@azdeq.gov](mailto:Greenslade.Maribeth@azdeq.gov)>; Lorri Rodriguez <[LorriRodriguez@florencecopper.com](mailto:LorriRodriguez@florencecopper.com)>  
Subject: RE: Notification of Intent and Scope of Planned Formation Testing for the PTF Area

I apologize, please see attachment.

Dan Johnson VP | General Manager



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**From:** Dan Johnson  
**Sent:** March-23-18 3:00 PM  
**To:** 'Rumrill, Nancy'  
**Cc:** Maribeth E. Greenslade; Lorri Rodriguez  
**Subject:** Notification of Intent and Scope of Planned Formation Testing for the PTF Area

Hi Nancy,

Attached is the Notification of Intent and Scope of Planned Formation Testing for the PTF Area for UIC Permit N. R9UIC-AZ3-FY11-1. The original is being mailed to you for your files. Have a great weekend!

Cheers,

Dan Johnson VP | General Manager



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